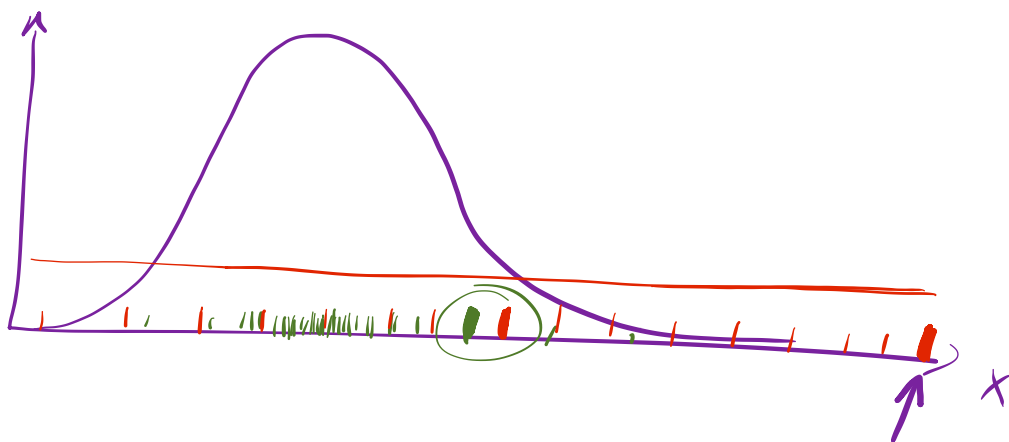


## 8.2.2 Interpreting experiments:

The null hypothesis:  $H_0$



$H_0$ : Formulate opposite hypothesis to the theory we want to test and aim to falsify this hypothesis.

## 9.1.2 Confidence belts

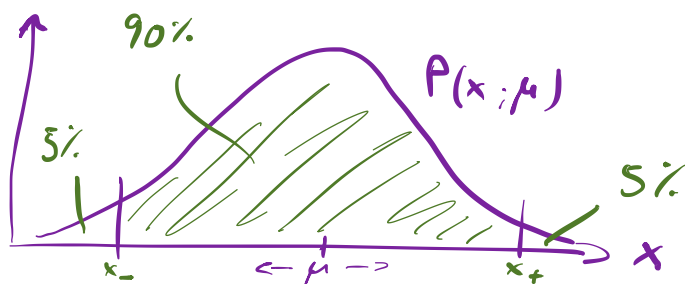
given a true value  $\mu$

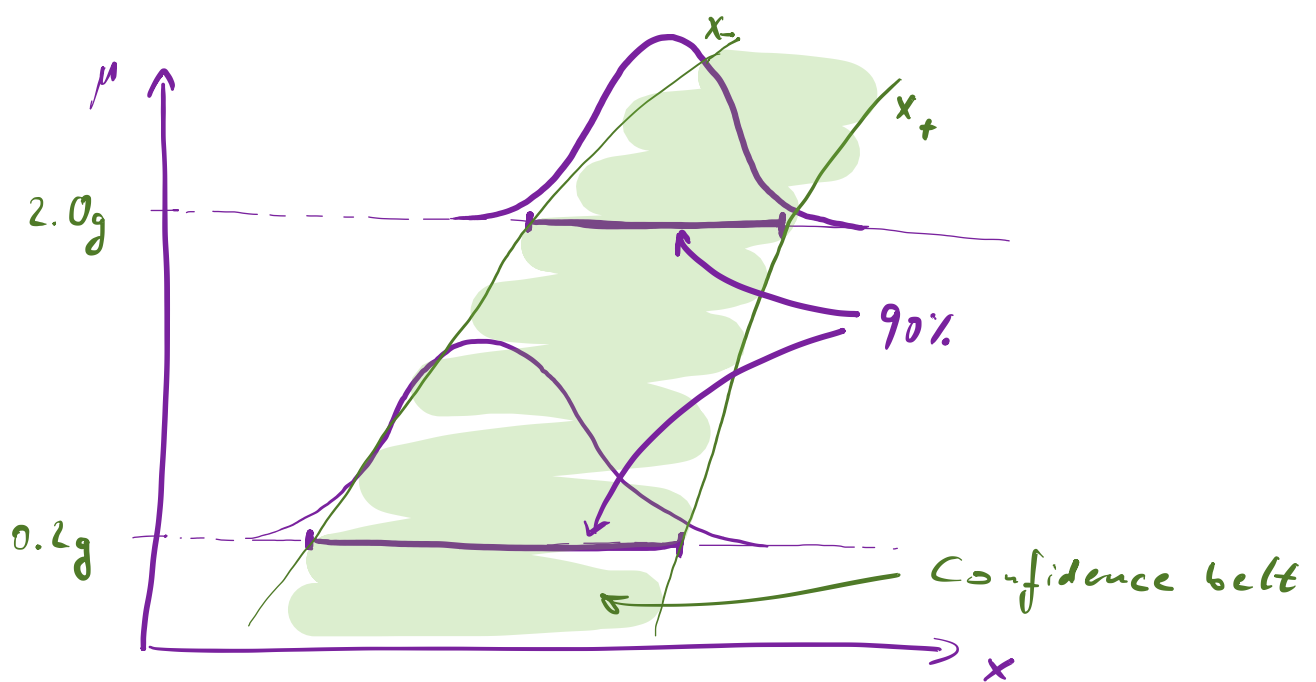
can write PDF for  $x$ :  $P(x; \mu)$

↳ could be Gaussian  
Poisson

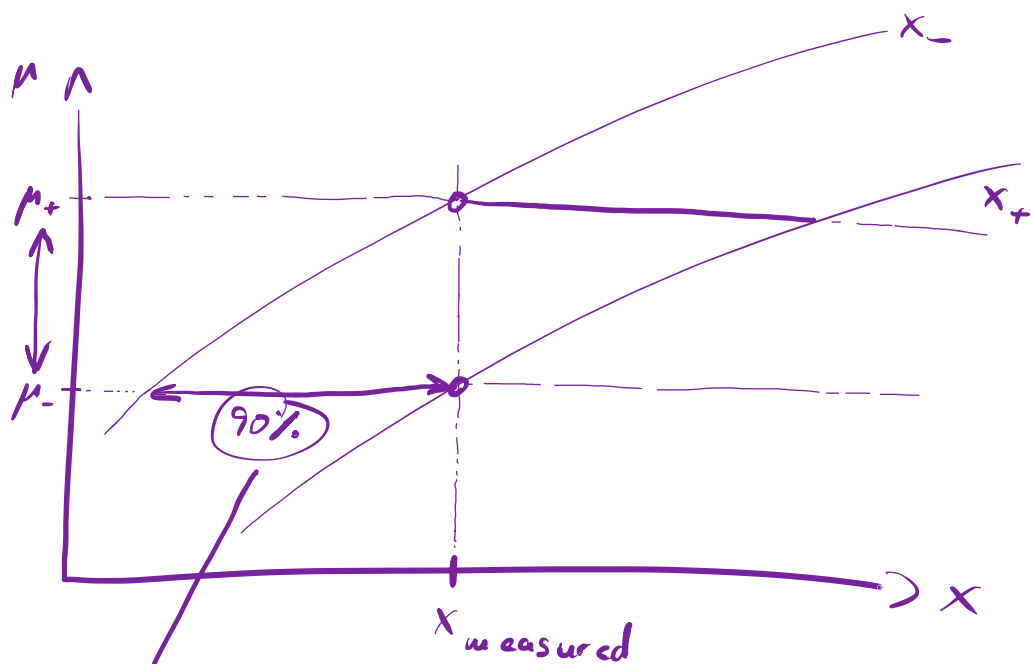
↳ likely peak near  $x = \mu$   
falling off either side

90% central interval for illustration





Confidence construction happens before any measurement



The true value of  $\mu$  lies between  $\mu_-$  and  $\mu_+$  with **90%** probability.

Note: This is a statement about  $\mu_{\pm}$  but not about the true value itself!